A SUBARBORESCENT NEW ERIODICTYON (HYDROPHYLLACEAE) FROM SAN LUIS OBISPO COUNTY, CALIFORNIA

Philip V. Wells

In June of 1960, the writer encountered colonies of an extremely tall yerba santa, measuring up to thirteen feet in height, on the sandstone ridges of Indian Knob, four miles north of Pismo, San Luis Obispo County, California (fig. 1). In the characters of the inflorescence, there is a close resemblance to *Eriodictyon californicum* (H. & A.) Torr., but the strongly linear and revolute leaves and densely pubescent capsules suggest a relationship to the isolated *E. capitatum* Eastw., which possesses an inflorescence unique for the genus. The combination of characters presented by the San Luis Obispo County *Eriodictyon* clearly sets it apart from the rest of the genus. This was verified by comparison with collections at the California Academy of Sciences and the University of California, Berkeley.

Eriodictyon altissimum P. V. Wells, sp. nov. Frutex glutinosus, 2–4 m. altus; foliis linearibus, 6.0–9.0 cm. longis, 2–4 mm. latis, margine revolutis, supra glabris et glutinosis, infra albo-tomentosis; inflorescentia cymosa-paniculata, ramulis elongatis, 4.0–9.0 cm. longis, glutinosis, floribus secundis in ramulis cymosis; calycis segmentis anguste lanceolatis, 2–3 mm. longis, glabris sed ciliatis et glutinosis; corollis purpurascentibus, infundibuliformibus, 11–15 mm. longis, exteriore villosis, interiore glabris, staminibus inclusis, filamentis basi villosis; stylis purpureis, basi villosis; capsulis pubescentibus.

Tall, straggling shrub to over 4 m. high, averaging ca. 2 m., with a trunk-like main stem up to 12 cm. in basal diameter; growth habit of some individuals excurrent, with falsely whorled lateral branches; suckers freely produced from stout rootstocks, probably serving for propagation when the tops are destroyed by fire; bark of main stems smooth, grayish; branches long and slender, ascending; the branchlets glutinous; leaves alternate, with a tendency to be opposite below, sessile, narrowly linear, 6.0 –9.0 cm. long, 2–4 mm. wide, entire, strongly revolute, glabrous and somewhat glutinous above, densely white-tomentose beneath, with heavy, sweet aroma; inflorescence an open panicle of cymes; flowers on minutely bracteate ramules 1–3 mm. long, secund on the lax, glutinous branches of the inflorescence, the branches ranging from 4–9 cm. in length; sepals lance-linear, 2–3 mm. long, ciliate on the margins, otherwise glabrous but glutinous; corolla infundibuliform, 11–15 mm. long, the limb lavender and the tube pale lavender to whitish below, sparsely villous without, glabrous within; stamens unequal, the filaments villous on the basal half; styles 5–7 mm. long, lavender, sparsely hairy below; ovary ca. 2 mm. long, densely short-pubescent and glutinous; capsule

FIG. 1. *Eriodictyon altissimum,* showing excurrent growth habit present in some individuals. Summit of San Luis Range near Indian Knob, San Luis Obispo County.

glutinous-pubescent, containing numerous polyhedral seeds, the seeds ca. 0.4 mm. long, brown, longitudinally finely striate and reticulate with cross-striations.

Holotype. Sandstone ridges of Indian Knob, elevation 880 feet, four miles north of Pismo, San Luis Obispo County, California, *P. V. Wells 75,* June 30, 1960, OBI. Isotypes at CAS, GH, UC, US.

Eriodictyon altissimum is apparently confined to shallow, sandy soils derived from siliceous sandstone (San Pablo group: upper Miocene) in the eastern part of the San Luis Range at elevations of 650 to 880 feet. It was not found on Franciscan rocks (feldspathic sandstone, radiolarian chert, diabase or serpentine), nor on siliceous Monterey shale, all of which outcrop at comparable elevations in the San Luis Range. The vegetation on the siliceous sandstone to which *E. altissimum* is confined is

largely chaparral interspersed with low woodlands of *Quercus agrifolia* Neé, and with one small stand of *Pinus muricata* D. Don. The chaparral matrix is dominated by *Arctostaphylos pilosula* Jeps. & Wies., with associated chamise, toyon, *Ceanothus impressus* Trel., *C. cuneatus* var. *ramulosus* Greene, and the subligneous *Salvia mellifera* Greene. (*Pinus muricata* and *Ceanothus impressus* are conspicuous in the Lompoc endemism area which harbors the linear-leaved *Eriodictyon capitatum*.)

Eriodictyon altissimum, like other members of the genus, has a weedy or pioneer ecology. It is aggressive on roadsides, with numerous young plants invading such disturbed sites. The large production of minute seeds averaging 0.2 mg. in weight provides the necessary mobility. It is apparently a rapidly growing, short-lived shrub, often overtopping by five feet or more the even-statured young manzanitas dating from the last chaparral fire. Thrifty specimens with luxuriant foliage rarely occur in the chaparral, being mainly confined to road sides. By far the greatest number of individuals observed had a senescent appearance, open and straggling with sparse foliage confined to the tips of branches (fig. 1).

Since this *Eriodictyon* combines characters of *E. californicum* and *E. capitatum* (or less possibly *E. angustifolium* Nutt.), one might suppose it to be of recent hybrid origin. However, none of these species occurs in the San Luis Range; in fact, there are no previous records of linear-leaved yerba santas from San Luis Obispo County (R. F. Hoover, unpublished checklist). If hybridization should prove to be involved, the writer sees no reason why a large, apparently stable population evolved in this manner should be given the nomenclatural treatment ordinarily accorded to hybrids of sporadic and ephemeral character.

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A NEW SPECIES OF QUERCUS FROM BAJA CALIFORNIA, MEXICO

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In a report upon his 1885 collection of the plants of Cedros Island, Baja California, Mexico, Greene (1888) made the following entry:

"66. Quercus. _____. A merely shrubby species of the White Oak series; leaves small, spinose-toothed and persistent; midway up the cañons." Greene's collections (with Geo. W. Dunn) were made in several canyons located on the northeast side of the island. Presumably a specimen of the oak is preserved in his herbarium. In 1922 G. Dallas Hanna collected the same oak at the "north end" of Cedros Island. His specimen is preserved in the herbarium of the California Academy of Sciences.

The plant first came to my notice in the form of a small flowering collection made on the island by A. L. Haines and G. O. Hale in 1939 and